

IN THE CLAIMS:

1. (Currently Amended) An apparatus for the air circulation in double-glazed thermoinsulated walls, the apparatus comprising:

double-glazed thermoinsulated walls including at least an intermediate glass pane, an internal glass pane and an external glass pane, said internal glass pane being positioned parallel to said external pane such that said internal glass pane and ~~said~~ second said external glass pane define a first space, said intermediate glass pane being parallel to said internal glass pane and parallel to said external glass pane, said intermediate glass pane being arranged in said space such that said intermediate glass pane divides said first space into a hermetically sealed space and a second space, said intermediate glass pane and said external glass pane defining at least a portion of said hermetically sealed space, said intermediate glass pane and said internal glass pane defining said second space, said hermetically sealed space being located opposite an outside environment, said second space being located opposite an inside environment;

a dimming element located within said hermetically sealed chamber;

an air inlet opening exclusively in communication with said second space and [[an]] the inside environment, said air inlet opening being located at the bottom of said internal glass pane;

an air outlet opening in communication with the outside environment and located at the top of said external glass pane;

a tangential fan of reduced size extending substantially the full length of one of the thermoinsulated walls, said tangential fan being located within a fan housing defined at the top of said first space, said tangential fan having a longitudinal opening in communication with said

second space for air intake from the inside environment, said fan being actuated such that air flows from said inside environment exclusively through said inlet opening into said second space and exits into said outside environment via said outlet opening, ~~whereby said space has a temperature equal to a temperature of said inside environment;~~

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a motor for actuating said tangential fan;  
a sensor detecting hygrothermal conditions of the air drawn in through said inlet opening via said tangential fan, said motor controlling a rotational speed of said tangential fan based on said hygrothermal conditions of said air detected via said sensor.

2. (Previously Presented) An apparatus according to claim 1, wherein said fan is suited to be driven at low rotational speed by an electrical motor drive fitted at an end of said housing.

3. (Currently Amended) An apparatus according to claim 2, wherein a portion of said sensor extends within said second space.

4. (Previously Presented) An apparatus according to claim 1, wherein said fan housing defines a fan outlet opening, said fan outlet opening being closed via a swinging closing member for preventing air from flowing back to the interior environment when said fan is not operative.

5. (Currently Amended) An apparatus according to claim 1, wherein said fan housing is defined by a substantially cylindrical sector shaped by a bearing element provided, in

assembled setting, with a longitudinal opening turned to said second space for the air intake through the second space, and with an opposed opening for the air outlet to the outside.

6. (Previously Presented) An apparatus according to claim 5, wherein said bearing element is removably constrained to a frame which is steadily fixed peripherally to one of said thermoinsulated walls.

7. (Currently Amended) An apparatus according to claim [[6]] 1, wherein said hermetically sealed space is hermetically sealed via frame is steadily fixed to a spacing [[means]] element fitted between said second external glass pane of glass and [[an]] said intermediate glass, said spacing element being composed of a plastic material, said spacing element, said internal glass pane and said external glass pane defining said hermetically sealed space pane of glass, said second external pane being parallel to the intermediate pane such that said second external pane and said intermediate pane define a room inside the space, which is turned to the outside, for the insertion of a dimming element.

8. (Previously Presented) An apparatus according to claim 6, wherein said frame is provided with an opening turned to the inside, at the top of said space, and with an opposite external hole for the air outlet, said opening and said external hole longitudinally extending to substantially the full length of the same frame.

9. (Previously Presented) An apparatus according to claim 8, wherein said opening turned to the inside of said frame is closed by a removable inspection door, said inspection door defining a lower groove for engaging an upper edge of said internal pane of glass by the interposition of a gasket means, said inspection door defining a curved portion for engaging a corresponding folded edge of the frame, said sensor being connected to said inspection door such that a portion of said sensor extends within said space.

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10. (Previously Presented) An apparatus according to claim 6, wherein a modular covering element is fitted externally to said frame, said modular covering element extending the full length of said thermoinsulated wall, said modular covering element defining a lower longitudinal opening for the air outlet.

11. (Previously Presented) An apparatus according to claim 5, wherein said bearing element is constituted by a light metal section.

12. (Currently Amended) An apparatus for circulating air, the apparatus comprising:  
double-glazed thermoinsulated walls including an intermediate glass pane, an internal glass pane having a bottom portion and an external glass pane having a top portion, said bottom portion of said internal glass pane defining an air inlet opening;  
a frame structure defining an air outlet opening in communication with an outside house environment, said air outlet opening being located adjacent to said top portion of said external

glass pane, said internal glass pane being positioned parallel to said external glass pane such that said internal glass pane is opposite said external glass pane, said intermediate glass being parallel to said internal glass pane and parallel to said external glass pane, said internal intermediate  
10 glass pane, said external glass pane and said frame structure defining an airflow space, said air inlet opening being exclusively in communication with said airflow space and an inside house environment;

a spacing element fixed to said frame structure, said spacing element engaging said external glass pane and said intermediate glass pane, said spacing element, said intermediate  
15 glass pane and said external glass pane defining a hermetically sealed space, said hermetically sealed space being located adjacent to a portion of said airflow space;

a dimming element positioned within said hermetically sealed space;  
a fan housing located within said frame structure, said fan housing being disposed opposite said air outlet;

20 a tangential fan of reduced size extending substantially the full length of one of said thermoinsulated walls, said tangential fan being located within said fan housing, said tangential fan having a longitudinal opening in communication with said airflow space for air intake from said inside house environment via said air inlet opening;

an electrical motor located at an end of said fan housing for actuating said tangential fan;  
25 sensors detecting hygrothermal conditions of air, said electrical motor controlling a rotational speed of said tangential fan based on the hygrothermal conditions of said air sensed via said sensors such that air flows exclusively from said inside environment through said

airflow space to said outside environment via said outlet opening to maintain a temperature of said space equal to a temperature of said inside environment.

13. (Previously Presented) An apparatus according to claim 12, wherein said fan housing defines a fan outlet opening, said fan outlet opening being closed via a closing member pivotably connected to said fan housing for preventing air from flowing back to the interior environment when said fan is not actuated.

14. (Previously Presented) An apparatus according to claim 12, wherein said fan housing is substantially cylindrical, said fan housing defining a longitudinal opening in communication with said space for receiving air from said inside house environment, said fan housing defining an opening opposite said longitudinal opening for exhausting to the outside environment via said air outlet.

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15. (Canceled)

16. (Previously Presented) An apparatus according to claim 14, wherein said air outlet opening extends substantially the full length of the frame structure.

17. (Previously Presented) An apparatus according to claim 16, wherein a removable inspection door is connected to said frame structure, said removable inspection door defining

a lower groove, said lower groove having a gasket located therein, said lower groove receiving an upper edge of said internal glass pane such that said gasket engages said upper edge of said internal glass pane, said inspection door defining a curved portion, said curved portion engaging a corresponding folded edge of said frame, one of said sensors having an air flow contacting portion, said one of said sensors having said air flow contacting portion being connected to said inspection door such that said air flow contacting portion is located within said airflow space, said electrical motor increasing said rotational speed of said tangential fan when said sensors detect an increased amount of moisture in the air.

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18. (Previously Presented) An apparatus according to claim 14, wherein a modular covering element is connected externally to said frame, said modular covering element extending the full length of one of said thermoinsulated walls, said modular covering element defining a lower longitudinal opening in communication with the air outlet opening.

19. (Currently Amended) An apparatus for circulating air, the apparatus comprising:  
double-glazed thermoinsulated walls including a first glass pane, [[and]] a second glass pane and a third glass pane, said first glass pane having a first glass inner surface exposed to a house interior environment and a first glass outer surface, said second glass pane having a second glass pane outer surface exposed to an outside environment external to said house interior environment and a second glass inner surface, said first glass pane being parallel to said second third glass pane such that said first glass pane outer surface and said second third glass

pane inner surface define an interior glass pane space, said first glass pane having a bottom first glass portion defining an air inlet, said second glass pane having a top second glass portion;

10 a frame structure defining an exhaust outlet located opposite said top second glass portion;

a sealing element fixed to said frame structure, said sealing element being in contact with said second glass pane and said third glass pane such that said second glass pane is located at a spaced location from said third glass pane, said sealing element having a sealing element surface, said third glass pane having a third glass pane inner surface and a third glass pane outer surface, said third glass pane being parallel to said second glass pane, said sealing element surface, said third glass pane outer surface and said second glass pane inner surface defining a portion of a hermetically sealed chamber, said hermetically sealed chamber being located adjacent to said interior glass pane space;

20 a dimming element arranged within said hermetically sealed chamber;

a fan housing located within said frame structure;

a tangential fan located within said fan housing, said tangential fan extending substantially along one of said double-glazed thermoinsulated walls, said tangential fan being in communication with said interior glass pane space and said exhaust outlet, said air inlet being in communication with only said interior glass pane space and said house interior environment and said exhaust outlet being in communication with said outside environment to define an air flow path, said tangential fan being actuated such that air flows from said house interior environment to said outside environment via said air flow path, said interior glass pane space

having a temperature equal to a temperature of said house interior environment;

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an electrical motor connected to said tangential fan;

a plurality of sensors, each sensor detecting hygrothermal conditions of air, said electrical motor actuating said tangential fan such that said fan draws air only from said house interior environment based on said hygrothermal conditions detected by said plurality of sensors.

20. (Previously Presented) An apparatus according to claim 19, further comprising:

an inspection door detachably connected to said frame structure, each sensor having an air contact portion, each sensor being connected to said inspection door such that said air contact portion extends within said interior glass pane space, said electrical motor increasing a rotational speed of said tangential fan when said plurality of sensors detect an increased 5 humidity content in the air, said hygrothermal conditions of the air including temperature of the air and humidity of the air.

21. (New) An apparatus according to claim 1, wherein said dimming element is a Venetian blind.